THE EFFECT OF ANCHORING ON INVESTMENT DECISION MAKING BY INDIVIDUAL INVESTORS IN KENYA

BY

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DECLARATION

I, the undersigned, declare that this project is my original work and that it has not been presented in any other university or institution for academic credit

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This research project has been submitted with my approval as university supervisor.

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DEDICATION

This project is dedicated to my loving husband Solomon and Children Rehema, Bashir, and Nyambura. Your support and inspiration during my studies enabled me to complete this project. I'll always value and esteem you people highly

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ABSTRACT

Behavioral finance attempts to investigate the psychological and sociological issues that influence investment decision making process of individual and institutions. It also considers how various psychological traits affect how individuals or groups act as investors, analysts, and portfolio manager. Literature has documented that individual and even institutional investors have embraced heuristics in their investment decision making. The study objective therefore sought to establish whether anchoring affect investment decisions of individuals in Kenya.

The study used descriptive researches that employed a survey study research design and targeted a population of individual investors in the 22 licensed brokerage firms operating in Kenya. Semi structured questionnaire was used for data collection with 85% response rate being registered. A random sample of 120 investors from the 22 licensed brokerage firms was picked for the study. Analysis was done using Statistical Packages for Social Scientists and Microsoft Excel, correlation to analyze the type of relationship between the variables in the study and Regression was used to determine the degree of relationship.

The study established that individual investment decisions are affected by anchoring behavior and that decisions are affected by experience of their past performance suggesting the effect of anchoring. The determination coefficient as measured by the adjusted R-square presented a strong positive relationship between dependent and independent variables gave a value of 0.936. This depicts that the factors account for 93.6% of the total variations in investors choices. Behavioral finance models are not empirically supported and therefore should not be used in isolation for investment analysis by individuals.

The study recommends that individuals should be sensitized on computational skills in simplifying complex tasks to make decision process easier instead of using heuristics which may lead people to some irrational behaviors. The study also recommends the need for a public campaign to increase awareness of basic investment principles as this is likely to help many individual investors make better decisions.

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LIST OF ACRONYMS AND ABBREVIATIONS

CAPM   -   Capital Asset Pricing Model

CMA   -   Capital Markets Authority

EMH   -   Efficient Market Hypothesis

EPRC   -   Economic Property Research Center

IFC   -   International Finance Corporation

MPT   -   Modern Portfolio Theory

NASI   -   NSE All Share Index

NSE   -   Nairobi Securities Exchange

UN   -   United Nations

VWAP   -   Volume-Weighted Average Price

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

According to Nofsinger (2001), the field of finance has evolved over the past few decades based on the assumption that people make rational decisions and that they are unbiased in their predictions about the future. Investors are thought of as a rational lot that take carefully weighted economically feasible decisions every single time. A rational investor can be defined as a one that always; updates his beliefs in a timely and appropriate manner on receiving new information and makes choices that are normatively acceptable (Thaler, 2005).

Theoretical and Experimental works of two psychologists Kahneman and Tversky (1974) contributed to psychology literature, served as foundation and gave rise to a new paradigm of Behavioral Finance, which studies how people actually behave in a financial setting. Similar to how a house should be built upon a good, solid foundation, our ideas and opinions should also be based on relevant and correct facts in order to be considered valid. However, this is not always so. The concept of anchoring draws on the tendency to attach or "anchor" our thoughts to a reference point - even though it may have no logical relevance to the decision at hand, Meir (2010). Although it may seem an unlikely phenomenon, anchoring is fairly prevalent in situations where people are dealing with concepts that are new and novel.

According to Meir (2010), behavioral finance is in conflict with the perspective of efficient market theory, which maintains that market prices are based on rational foundations, like the fundamental financial health and performance of a company thus leading to market imperfections.

Modern portfolio theory and behavioral finance represent differing schools of thought that attempt to explain investor behavior. Perhaps the easiest way to think about their arguments and positions is to think of modern portfolio theory as how the financial markets would work in the ideal world and behavioral finance as how financial markets work in the real world. Having a solid understanding of both theory and reality can help you make better investment decisions, Lisa, (2013).

1.1.1 Anchoring

Tversky and Kahneman (1974) define anchoring to be when people make estimates by starting from an initial value that is adjusted to yield the final answer and since adjustments are typically insufficient, different starting points yield different estimates, which are biased towards the initial values. They further stretched out that anchoring as the use of irrelevant information as a reference for evaluating or estimating some unknown value or information. When anchoring, people base decisions or estimates on events or values known to them, even though these facts may have no bearing on the actual event or value.

Anchoring can be captured by the fact that the investors rely on past experience, past prices (fair prices), ignore new information, fixing prices before buying or selling stock

and being on the lookout for the best time to buy/sell stock, guided by moods and the level of openness to new experiences.

Various factors are seen as influencers of anchoring. A wide range of research has linked sad or depressed moods with more extensive and accurate evaluation of problems, Bodenhausen, Gabriel and Lineberger, (2000). As a result of this, earlier studies hypothesized that people with more depressed moods would tend to use anchoring less than those with happier moods. However, more recent studies have shown the opposite effect: sad people are more likely to use anchoring than people with happy or neutral mood, (Englich & Soder, 2009).

According to Wilson et al (1996) the research found that experts (those with high knowledge, experience, or expertise in some field) were more resistant to the anchoring effect. Since then, however, numerous studies have demonstrated that while experience can sometimes reduce the effect, even experts are susceptible to anchoring. In a study concerning the effects of anchoring on judicial decisions, researchers found that even experienced legal professionals were affected by anchoring. This remained true even when the anchors provided were arbitrary and unrelated to the case in question, (Englich, Mussweiler & Strack, 2006).

Research has correlated susceptibility to anchoring with most of the Big Five personality traits. People high in agreeableness and conscientiousness are more likely to be affected by anchoring, while those high in extroversion are less likely to be affected (Eroglu &

Croxton, 2010). Another study conducted by McElroy and Dowd, (2007) found that those high in openness to new experiences were more susceptible to the anchoring effect.

The impact of cognitive ability on anchoring is contested. A recent study on willingness to pay for consumer goods by Bergman et al, (2010) found that anchoring decreased in those with greater cognitive ability, though it did not disappear. Whereas Oechssler, Roider, and Schmitz, (2009) found that cognitive ability had no significant effect on how likely people were to use anchoring.

1.1.2 Investment Decisions

Investment according to Bodie et al. (2008) is the current commitment of money or other resources in the expectation of reaping future benefits. Investment management is the professional management of investment funds for individuals, families and institutions. It can be done either by the consumer or a professional and can be passive, active, aggressive or conservative. The level of return will depend on internal factors and characteristics such as type of investment, quality of management, and how the investment is financed (Griffith, 1990).

Investors have difficulties making long term financial decisions for reasons such as shortsightedness, a lack of financial sophistication and inability to self regulate (Winchester et al. 2011). The individual investors can employ a team of investment professionals under the direction of a portfolio or fund manager. These individuals work full time on studying the markets, market trends, and individual stocks (Fischer & Jordan,

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1995). Investment decisions should be guided by predefined asset allocation decisions that incorporate an acceptable level of risk for the overall portfolio and are consistent with the goals and time horizon of the investor (Winchester et al. 2011). The willingness to act prudently and maintain an appropriately balanced investment portfolio in the face of falling security prices requires the ability to avoid behavioral impulses when making long term asset allocation decisions (Winchester et al. 2011) A Number of studies have been conducted pointing to market anomalies that cannot be explained with the help of financial theories, such as abnormal price movements in connection with IPOs, mergers, stock splits, and spin-offs (Johnson et al. 2002). The high trading volume on organized exchange is perhaps the single most embarrassing fact to the standard finance paradigm. It must be stressed that the high volume is not produced by amateur investors. The average turnover for institutional investors is much higher than the rate for individuals (DeBondt & Thaler, 1994).

Investors have been shown not to react logically to new information but to be over confident to alter their choices when given superficial changes in the presentation of investment information (Olsen, 1998). These anomalies suggest that the underlying principles of rational behavior underlying the efficient market hypothesis are not entirely correct, and that we need to look at other models of human behavior, as have been studied in other social sciences (Shiller, 1998).

1.1.3 The Effect of Anchoring on Decision Making

Decision-making can be defined as the process of choosing a particular alternative from many available alternatives. It is a complicated multi-step process involving analysis of various personal, technical and situational factors. There are no exceptions in the case of making decisions in the stock markets either. Taking investment decisions is the most crucial challenge faced by investors. Some personal factors are age, education, income etc. On the technical side, investment decisions can be derived from various models of finance, for e.g. the capital asset pricing model (CAPM). Decisions should not be reached without considering situational factors that take into account the environment, the market psychology in other words.

Effective decision making in the stock market requires an understanding of human nature in a global perspective on top of financial skills. Thus cognitive psychology should be given importance in the process of decision-making (Chandra, 2008). As a result of the bull market from 2004 to 2007 and the subsequent financial crisis, there has been a lot of fresh focus on the irrational investor. Studying irrational investor behavior has become important.

Behavioral Finance is becoming an integral part of decision-making process because it heavily influences the investors' performance, (Banerjee, 2011). An understanding of how our emotions result in irrational behaviour is indispensable for any investor, (Parikh, 2011). Investors can educate themselves about the various biases they are likely to exhibit and then take steps towards avoiding it thus improving their effectiveness. Some common

mistakes made by investors are selling too soon while booking profits, holding too long while facing losses, buying overpriced stocks based on market sentiments and positive evaluation by all and sundry. The key, according to Parikh, for an investor so succeed is to get in touch with the emotional indiscipline he has exhibited, and deal with it so that it is not repeated; it is only when you combine sound intellect with emotional discipline that you get rational behavior (Parikh, 2011).

According to Whyte and Sebenius (1997), markets could frustrate the greatest number of market participants and usually they do so by taking advantage of common behavioural biases, such as anchoring. If the investors sticks to this behavioural bias, then the securities market will be very rigid, characterized by irrational non-informed decisions and little portfolio diversification will be exercised. The upcoming firms will also have difficulty in raising funds at the securities market since the investors does not have the initial value on which to build estimates.

Ari (2009) found out that anchoring occurs when we become stuck to a particular reference point as a basis for making judgments and decisions and it is common for traders to anchor to an entry point after entering a position. Many traders will refuse to take a loss, instead waiting for the market to return to the entry point to allow them to scratch the trade.

According to Bretton (2009) many traders refuse to exit a bad position that moved to within ticks of their entry, fixed on exiting at the anchored point of entry and the result is that they often end up taking much larger losses when sheer pain becomes their stop-loss

mechanism. People are most likely to anchor decisions to criteria that capture their attention and for that reason trades commonly anchor to high points and low points in market movements, including obvious points of support and resistance. Traders will gravitate to these points for the placement of their stops as well as their entries for breakout trades. If a trader anchors to a support or resistance level to enter a breakout trade, the trader may be completely unaware of the demand or supply that rests below or above those anchor levels. Similarly if a trader places a stop near an obvious region of high low prices, he may increase the odds that normal market probes will take out those levels in the search for value.

Anchoring has a tendency to consider logically irrelevant price level as important in the process of decision making could lead to missed investment opportunities and bad entry timing into the market, (Rahul, 2012). Anchoring effect holds even when the anchor is subliminal, this is impossible, since anchoring is only the result of conscious adjustment.

1.1.4 Nairobi Securities Exchange

The NSE began in the early 1920s while Kenya was considered a colony under British control. It was an informal marketplace for local stocks and shares. By 1954, a true stock exchange was created when the NSE was officially recognized by the London Stock Exchange as an overseas stock exchange.

After Kenyan independence from Britain, the stock exchange continued to grow and become a major financial institution. The facilities have modernized since the original "handshake over coffee" method of trading. In 2008, the NSE All Share Index (NASI) was introduced as an alternative index. Its measure is an overall indicator of market performance; it incorporates all the traded shares of the day. Its attention is therefore on the overall market capitalization rather than the price movements of select counters and in July 2011, the Nairobi Stock Exchange Limited, changed its name to the Nairobi Securities Exchange Limited. The change of name reflected the strategic plan of the Nairobi Securities Exchange to evolve into a full service securities exchange which supports trading, clearing and settlement of equities, debt, derivatives and other associated instruments. The NSE has recently adapted an automated trading system, to keep pace with other major world stock exchanges.

There more than 50 businesses and companies listed in the Nairobi Stock Exchange and more than 20 licensed stock brokers at the exchange. Currently the NSE is trading more than a 100 million shares each month, and plays a large role in the economic growth of Kenya. The volume of stocks traded in Nairobi was 5.46 billion in 2012 compared with a record 7.55 billion in 2010 and 5.72 billion in 2011.

1.2 Research Problem

Heuristics are general decision making strategies people use that are based on little information, yet very often correct; heuristics are mental short cuts that reduce the cognitive burden associated with decision making (Shah & Oppenheimer, 2008). Shah

and Oppenheimer argued that heuristics reduce work in decision making in several ways. Heuristics offer the user the ability to scrutinize few signals and/or alternative choices in decision making. In addition, heuristics diminish the work of retrieving and storing information in memory; streamlining the decision making process by reducing the amount of integrated information necessary in making the choice or passing judgment (Shah & Oppenheimer, 2008). The rational expectation theories which are standard (traditional) finance theories explain the happenings in the stock markets using models in which the investors are rational and how stock prices reflect the available information in the market. However, there are instances where stock markets go contrary to this explanation, due to other factors, such as Anchoring thus leading to market imperfections and influencing the trend in stock market. Black and Diaz (1996) found out that Anchoring provides a reference point from which to perceive and negotiate worth.

More established companies listed at NSE in Kenya have always traded their shares at the financial market however this has not been with various challenges alleviated by price fluctuations, ever changing economic trends, volume of trade etc. Small-scale enterprises and upcoming firms are in need to raise Finances (equity) to meet their capital structure needs. This can be achieved through issue of shares, whereas upcoming listed companies stocks may be more valuable ventures, investors are seen to form an opinion and are unwilling to change it, even though they receive new information that is relevant and could shift their overall portfolios. In decision making, people rely on a host of heuristics for convenience and speed. The motivation behind this study is to review the effect of

anchoring on investment decisions making by individuals and how it can be eliminated to favour the upcoming firms on raising capital.

A study by Johnson, Lindbon and Platan (2002) on factors that influenced the speculative bubble during the 1998-2000 involved a survey of 160 private investors drawn from Aktiesprarna Association in South Sweden in December 2001 and 47 institutional investors comprising of banks, mutual funds and investments banks was conducted by use of a questionnaire. The study findings were that herd instincts, cognitive dissonance, anchoring and loss aversion contributed significantly to the speculative bubbles as well as overconfidence.

Furnham, and Boo, (2011) put forward that several theories have been put forth to explain what causes anchoring, although some explanations are more popular than others, there is no consensus as to which is best. In a study on possible causes of anchoring, two authors described anchoring as easy to demonstrate, but hard to explain, Strack, & Mussweiler, (1997). At least one group of researchers has argued that multiple causes are at play, and that what is called "anchoring" is actually several different effects.

Kahn and Tversky (1974) examined the impact that behavioural activities had on investors to bridge the gap which had not been explained by conventional finance and scholars. Practical market experiences have shown that investors are not always rational and their actions are not always based on the correct information. Therefore the deficiencies in the models necessitated study which would bring market results close to

reality. The anchor behaviour concept would indicate the influence of incorrect information in financial decision making.

Kahuthu (2011) examined another heuristic bias known as herding was at play at pricing of stock at the NSE. The study established that herd instinct exists and that some investors were influenced by others while others relied on technical analysis made by financial experts. The study also found out that the stock price and trading volume increased during the herd instinct period, the habit of influence was clearly demonstrated by the group who indicated that the decision to invest relied on whims and beliefs of opinion leaders mainly the chairmen and treasurers of groups.

Existence of bias provides opportunities for excess returns, (Kahuthu, 2011). It is of essence to be familiar with the biases firstly because they can lead to inferior performance as an analyst and asset manager and secondly it would make it possible to exploit inferior performance for excess gains. In Kenya where information asymmetry is common, behavioural finance comes into play with the concept of Anchor Behaviour being viewed as among the key causes.

Shikuku (2012) did a study to investigate the effect of behavioral factors on investment decision-making by unit trusts involved assessment of 11 registered unit trust companies in Kenya. The study found out that, even though unit trusts are managed by experts their investment decisions are sometimes affected by emotional and psychological factors.

Most of studies done on behavioral finance are outside African context; however none of the related global or local studies gives conclusive results on Kenyan stock market. Therefore this study sought to provide an insight on the following research question; what is the effect of anchoring on investment decision making by individual investors in Kenya?

1.3 Research Objective

To determine the effect of Anchoring on Investment decision making by individual investors in Kenya

1.4 Value of the Study

The findings of this review is to provide a review of theory and empirical evidence on behavioral bias of anchoring in financial markets to help understand the market dynamics and look more closely at factors other than price that influence the performance of the securities market in Kenya.

This study will provide as insight to investors and potential investors since they will make viable investment decisions without relying on incorrect information, without having to hold on unprofitable ventures when the markets presents variety of good stock in upcoming firms.

To the Capital Markets Authority (CMA), this study will help in enacting well designed strategies on the efficient operation and management of the stock market in Kenya as this will bring the behavioural perspective in view in decisions on trading of securities.

This research will be useful especially to upcoming firms who need to solicit for Equity from the general public. It will help them to know the effect of conservatism therefore form strategies to overcome this challenge from already stable listed firms will be able to price their stock appropriately

The findings of this review will provide a review of theory and empirical evidence on behavioral finance to the learning institutions that will open up further areas of study.

To the stock brokers, it will be an eye-opener and provide guidelines on effect of behavioral bias on trading activities and to understand the market dynamics and look more closely at factors other than price that influence the performance of the securities in the market and how to deal with newly traded securities.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The review of literature involves the systematic identification, location and analysis of documents containing information related to the research problem being investigated. It reviews various literatures related to the study and sentiments of various authorities study.

2.2 Theoretical Review

The Efficient Market Hypothesis (EMH) and the rational expectation theories which are standard (traditional) finance theories explain the happenings in the stock markets using models in which the investors are rational and how stock prices reflect the available information in the market. However, there are instances where stock markets go contrary to this explanation, due to other factors, thus leading to market imperfections such as Anchoring. Behavioural finance outlines behavioural aspects such as loss aversion, overconfidence, cognitive dissonance, cognitive heuristics, self deception, representativeness, anchoring, behavioural biases and herd formation portrayed by individual investors as examples of such imperfections. These behaviours in turn influence the trend in the stock market

2.2.1 Prospect Theory

Tversky and Kahneman (1979) by way of developing the Prospect Theory showed how people manage risk and uncertainty. In essence, the theory explains the apparent regularity in human behaviours when assessing risk under uncertainty. That is, human beings are not consistently risk-averse; rather they are risk-averse in gains but risk-takers in losses. According to Tversky and Kahneman, people place much more weight on the outcomes that are perceived more certain than that are considered mere probable, a feature known as the "certainty effect". People's choices are also affected by 'framing effect'. Framing refers to the way a problem is posed to the decision maker and their 'mental accounting' of that problem.

The theory describes the decision processes in two stages: editing and evaluation. During editing, outcomes of a decision are ordered according to a certain heuristic. In particular, people decide which outcomes they consider equivalent, set a reference point and then consider lesser outcomes as losses and greater ones as gains. The editing phase aims to alleviate any Framing effects. It also aims to resolve isolation effects stemming from individuals' propensity to often isolate consecutive probabilities instead of treating them together. In the subsequent evaluation phase, people behave as if they would compute a value (utility), based on the potential outcomes and their respective probabilities, and then choose the alternative having a higher utility.

2.2.1 Modern Portfolio Theory

Modern Portfolio Theory (MPT), a hypothesis put forth by Harry Markowitz (1952) in his paper "Portfolio Selection," is an investment theory based on the idea that risk-averse investors can construct portfolios to optimize or maximize expected return based on a given level of market risk, emphasizing that risk is an inherent part of higher reward. It is one of the most important and influential economic theories dealing with finance and investment. Also called "portfolio theory" or "portfolio management theory," MPT suggests that it is possible to construct an "efficient frontier" of optimal portfolios, offering the maximum possible expected return for a given level of risk. It suggests that it is not enough to look at the expected risk and return of one particular stock. By investing in more than one stock, an investor can reap the benefits of diversification, particularly a reduction in the riskiness of the portfolio. MPT quantifies the benefits of diversification, also known as not putting all of your eggs in one basket.

The risk in a portfolio of diverse individual stocks will be less than the risk inherent in holding any one of the individual stocks (provided the risks of the various stocks are not directly related). Consider a portfolio that holds two risky stocks: one that pays off when it rains and another that pays off when it doesn't rain. A portfolio that contains both assets will always pay off, regardless of whether it rains or shines. Adding one risky asset to another can reduce the overall risk of an all-weather portfolio. In other words, Markowitz showed that investment is not just about picking stocks, but about choosing the right combination of stocks among which to distribute one's nest egg.

2.2.2 Efficient Market Hypothesis

An efficient market is defined as a market where there are large numbers of rational, profit-maximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value. (Fama, 1965)

The Efficient Market Hypothesis (EMH) has been a central finance paradigm for over 40 years, probably the most criticized too. Fama (1970) defined an efficient market as one in which security prices fully reflect all available information, and hypothesis states that real world financial markets are efficient. Fama goes on to say that it would be impossible for a trading system based on currently available information to have excess returns consistently.

The theoretical foundation of EMH is based on three key arguments: Firstly investors are rational and value securities rationally, secondly that in case some investors are irrational, their trades are random and cancel each other out without affecting prices and thirdly is that rational arbitrageurs eliminate the influence of irrational investors on market. The fact that Efficient Market Hypothesis was not purely based on rationality alone but also predicted efficient markets in cases where rationality did not exist, gave the theory a lot

of credibility. The empirical evidence from the 1970s, which only strengthened the cause, fell into two main categories; any fresh news about a security should be reflected in its price promptly and completely and prices should not move as long as there is no new information about the company, since it must be exactly equal to the value of the security, (Shleifer, 2000).

2.2.3 Learning Theory

Learning theory evolved most notably with the work of Skinner who determined that once the behaviour is associated with a consequence, whether a reinforcement or punishment, the likelihood of the action continuing changes. Skinner argued that positive reinforcement and punishment are not equal; with the former providing longer lasting results and the latter having negative side effects (Skinner, 1953). Critics of learning theory question the greater scientific basis of behaviorism over psychosocial or psychoanalysis theory and the ability to explain complex human behaviors by only considering the observable and ignoring the important roles of cognitions and emotions (Mark, 2010). Additionally, because behavioral 14 experiments often take place in the laboratory, critics question learning theory's application to describing behaviour that occurs in a social reality (Gilovich, Robert & Amos 1985).

Nevertheless, learning theory advanced investigations of human behaviour by focusing attention on the observable, thus emphasizing the importance of testing behaviour propositions. It acknowledges the power of prerequisite conditions and the anticipated consequences, whether positive or negative, in influencing people's actions. Thus, in

contrast to theories that emphasized the power of early development, learning theory emphasizes the possibility of lifelong learning during which the stimulus for or the consequences of behaviors can be altered, (Genesove, 1999).

2.3 Determinants of Investment Choices

2.3.1 Characteristics of Securities

According to Kumar (2004), stock-specific characteristics explain a significant portion of the variation in stock trading volume. Features such as the average price, size, covariance of returns, its institutional ownership and whether or not options trade is permitted on this stock all determine how a security is received in the market by investors since the sole aim of investors is to make maximum gains.

2.3.2 Past Prices

Past price extremes influence investors' trading decisions, Kumar (2004) documented that trading volume is higher when a stock trades above the highest or below the lowest price attained during a 52 weeks benchmark period and then gradually subsides.

2.3.3 Industry

Trading decisions for a firm depends on which industry the particular firm belongs. Investors tend to favor some industries over others which could be brought about by the popularity of the industry, prestige, technological advancement and global recognition,

thus even stocks from a profitable firm would not trade well if the it is based is lowly preferred industry by the investors.

2.3.4 Investors' Beliefs about The Value of The Asset

Investors' prior belief heterogeneity causes them to hold portfolio positions that they must rebalance in light of new information such as a quarterly earnings announcement, Karpoff (1986), Varian (1989), when investors interpret new information differentially, they revise their prior beliefs differentially and that leads to a new round of trading to re-equilibrate prior individual asset portfolios. Analytically a decrease (increase) in consensus among market agents is associated with an increase (decrease) in trading activities. That is, trading increases (decreases) as consensus decreases (increases) because of increased (decreased) diversity in investors' beliefs about the value of the asset. Holthausen and Verrecchia (1990) showed analytically that a decrease (increase) in the consensus effect among investors is associated with an increase (decrease) in tracing activities.

2.3.5 Level of Education, Training and Experience

Chevalier and Ellison's (1999) argued that while a small impact of holding a business degree on investment choices as suggesting that while high educational attainment enhances performance, expertise in the area of business does not. The (weak) negative relationship of years of experience on return may reflect career concerns with less experienced investors feeling the need to work harder than those with more experience. Personal judgment in making investment decisions, is found to be solely determined by

years of experience as an investor. The positive coefficient on this variable is consistent with expectations: more experienced investors use more personal judgment in making decisions.

2.3.6 Disposition Effect

Shefrin and Statman (1985) coined the term disposition effect and showed it to be an important determinant of trading behavior by investors at a retail brokerage and that mandatory issues with higher volume tend to be larger, more recently issued, and the obligations of firms without publicly traded equity.

2.3.7 Anchoring

Anchoring can be a source of frustration in the financial world, as investors base their decisions on irrelevant figures and statistics, (Reilly & Brown 2006). For example, some investors invest in the stocks of companies that have fallen considerably in a very short amount of time. In this case, the investor is anchoring on a recent "high" that the stock has achieved and consequently believes that the drop in price provides an opportunity to buy the stock at a discount, (Brooks, (2011).

Other reasons for trade include endowment differences, trading for liquidity, risk tolerance, tax, portfolio rebalancing, and transaction cost considerations.

2.4 Empirical Review

This section involves the empirical evidence of the variables of the study and related evidence. First it covers the global evidence and the second part covers the local studies in relation to this study

2.4.1 International Evidence

Early empirical studies by Black et al (1972) and Fama et al (1973) suggest that a significant positive cross-sectional relationship between security Betas and expected returns, which directly supports the capital asset pricing model (CAPM) Sharpe (1964), Lintner (1965), Mossin (1966). However, Fama and French contradict findings of CAPM by asserting that the relationship between expected returns and market beta is insignificant. Jaganathan and Wang (1996) found a modest relationship between conditional Beta and expected returns when the market is expanded to include human capital. However, the practical prices have always differed with any price predicted using any of the models recommended by conventional scholars. That market always reflect the behavoural bias of investors hence the difference in prices.

In a 1974 paper entitled "Judgment under Uncertainty: Heuristics and Biases", Kahneman and Tversky conducted a study in which a wheel containing the numbers 1 though 100 was spun. Then, subjects were asked whether the percentage of U.N. membership accounted for by African countries was higher or lower than the number on the wheel. Afterward, the subjects were asked to give an actual estimate. Tversky and Kahneman found that the seemingly random anchoring value of the number on which the wheel

landed had a pronounced effect on the answer that the subjects gave. For example, when the wheel landed on 10, the average estimate given by the subjects was 25%, whereas when the wheel landed on 60, the average estimate was 45%. The random number had an anchoring effect on the subjects' responses, pulling their estimates closer to the number they were just shown - even though the number had absolutely no correlation at all to the question.

Haugen and Baker (1996) findings indicates that the strongest determinants of expected returns are past returns, trading volume and accounting ratios such as return on Equity and prices or Earning Ratio. They found no evidence that risk measures such as systematic or total volatility are material for the cross section or returns; however Baker et al (2004) argue that the negative relation between returns and past volume is driven by optimistic investors generating volume. While Theoretical models predict that overconfident investors will trade more than rational investors, Glaser and Weber (2003) conducted an empirical study on Overconfidence and Trading decisions. They directly tested this hypothesis by correlating individual overconfidence scores with several measures of trading volume of individual investors (number of trades, turnover). Approximately 3000 online broker investors were asked to answer an internet questionnaire which was designed to measure various facets of overconfidence (miscalibration, the better than average effect, illusion of control, unrealistic optimism). The measures of trading volume were calculated by the trades of 215 individual investors who answered the questionnaire. They found that investors who think that they are above average in terms of investment skills or past performance trade more.

They argued that their findings present a psychological foundation for the "differences of opinion" explanation of high levels of trading volume. In addition, their way of empirically evaluating behavioral finance models - the correlation of economic and psychological variables and the combination of psychometric measures of judgment biases (such as overconfidence scores) and field data - seems to be a promising way to better understand which psychological phenomena drive economic behavior.

A study by Johnson, Lindbon and Platan (2002) on factors that influenced the speculative bubble during the 1998-2000 involved a survey of 160 private investors drawn from Aktiesprarna Association in South Sweden in December 2001 and 47 institutional investors comprising of banks, mutual funds and investments banks was conducted by use of a questionnaire. The study findings were that herd instincts, cognitive dissonance, anchoring and loss aversion contributed significantly to the speculative bubbles as well as overconfidence.

A research on Analysis of Auditors' Perceptions and Over-reliance on Negative Information by David (2002) found out that both in psychology and accounting indicates that humans, in making decisions, resort to using decision strategies known as heuristics. One heuristic of particular interest in the field of accounting is that of anchoring and adjustment. Empirical research has shown that subjects will sometimes bias judgments towards the anchor even in situations where the anchor is of little value or is irrelevant. Explains that the presence of a primary or recency effect in the context of the anchoring and adjustment heuristic may be the existence of an "internal anchor". Combining these

theories hypothesizes that auditors would use their initial mindset as an anchor. A laboratory experiment indicated that auditors did employ the anchoring and adjustment heuristic; they did have a negative internal anchor; and the inertia effect could be used to predict whether a primary or recency effect would be present in particular likelihood estimation. The results gave strong support for the idea that auditors place over-reliance on negative information. However, the results indicated that students did not have an internal anchor, did not employ the anchoring and adjustment heuristic and that the inertia effect was not useful in predicting whether a primary or recency effect would be present in particular likelihood estimation.

While Theoretical models predict that overconfident investors will trade more than rational investors, Glaser and Weber (2003) conducted an empirical study on Overconfidence and Trading Volume. They directly tested this hypothesis by correlating individual overconfidence scores with several measures of trading volume of individual investors (number of trades, turnover). Approximately 3000 online broker investors were asked to answer an internet questionnaire which was designed to measure various facets of overconfidence (miscalibration, the better than average effect, illusion of control, unrealistic optimism). The measures of trading volume were calculated by the trades of 215 individual investors who answered the questionnaire. They found that investors who think that they are above average in terms of investment skills or past performance trade more. Measures of miscalibration are, contrary to theory, unrelated to measures of trading volume. This result is striking as theoretical models that incorporate overconfident

investors mainly motivate this assumption by the calibration literature and model overconfidence as underestimation of the variance of signals.

The results hold even when they controlled for several other determinants of investment decisions in a cross-sectional regression analysis. In connection with other recent findings, we conclude that the usual way of motivating and modeling overconfidence which is mainly based on the calibration literature has to be treated with caution. They argued that their findings present a psychological foundation for the "differences of opinion. In addition, their way of empirically evaluating behavioral finance models - the correlation of economic and psychological variables and the combination of psychometric measures of judgment biases (such as overconfidence scores) and field data - seems to be a promising way to better understand which psychological phenomena drive economic behavior.

Giridhari and Debasish (2011) studied that investors invest in different investment avenues for fulfilling financial, social and psychological need. The study involved a sample of 185 investors and was carried out in Central India between 2009-2010.Findings were that while selecting any financial avenue they also expect other type of benefits like, safety and security, getting periodic return or dividends, high capital gain, secured future, liquidity, easy purchase, tax benefit, meeting future contingency etc.

A study by Leung and Tsang (2011) on anchoring and loss aversion in the housing market and the implications on price dynamics was carried out in Hong Kong. They used

housing transaction data provided by the Economic Property Research Center (EPRC) as their main source of data. The data set covered most of the housing transactions from 1992 to 2006 that contained many aspects of each transaction, including prices, gross and net area, address, floor, age, number of bedrooms and living rooms.73,860 observations were the benchmark sample. They found out that Price dispersion and volume are pro-cyclical (as positively correlated with the average house price). They observed that when the housing market was in a boom, a larger number of transactions and more disperse prices prevailed. That is, for two housing units with similar characteristics, they found them to have more diverse prices during the boom time if anchoring decreases over time. Using a sample of repeated sales, they show that both anchoring and loss aversion are present in the Hong Kong housing market.

Knowing that both buyers and sellers are not rational, they proposed a simple model to show the impact of the two cognitive biases on house price dynamics. When both effects are present, both price dispersion and trade volume are positively correlated with the average house price. They also found out that a declining anchoring effect does relate to declining price dispersion and volume. They viewed their findings as supportive of an important role played by anchoring and loss aversion on the cyclicality of house prices.

2.4.2 Local Evidence

Wera (2006) conducted a survey on the influence of gamblers fallacy on investors at the NSE by targeting 100 individuals. The results found that majority of investors will gamble by holding the stocks for a month with prospect of breaking even. A considerable

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percentage chose to sell now to minimize losses, loss aversion. The preference for holding stock indicates that all investors are risk averse.

Shikuku (2012) did a study to investigate the effect of behavioral factors on investment decision-making by unit trusts involved assessment of 11 registered unit trust companies in Kenya. Data was collected through a questionnaire. The study found out that, even though unit trusts are managed by experts their investment decisions are sometimes affected by emotional and psychological factors.

Ngode (2012) in a study to determine the effect of behavioral biases on the mutual fund choices by investors, anchored in four specific objectives. These included the effects of: the disposition effect behavior, the narrow framing behavior, the overconfidence behavior and the lottery stock preference behavior on investor's mutual fund choices. The study used descriptive researches that employed a case study research design and targeted a population of all mutual fund investors in the 16 licensed mutual fund operators in Kenya. A random sample of 80 investors from the 16 licensed firms was picked for the study. Primary data was collected through questionnaires while correlation was used to analyze the degree of relationship between the variables in the study. Regression was used to determine the type of relationship. The study presents evidence of the existence of behavioral biases of mutual fund choices by investors in Kenya. It also found out that investors exhibit a positive bias, consistent with earlier studies carried on the same subject.

2.5 Summary of the Literature Review

The Efficient Market Hypothesis (EMH) and the rational expectation theories which are standard (traditional) finance theories explain the happenings in the stock markets using models in which the investors are rational and how stock prices reflect the available information in the market. However, there are instances where stock markets go contrary to this explanation, due to other factors, thus leading to market imperfections such as Anchoring.

Human beings are not consistently risk-averse; rather they are risk-averse in gains but risk-takers in losses. According to Tversky and Kahneman, people place much more weight on the outcomes that are perceived more certain than that are considered mere probable, a feature known as the "certainty effect, therefore the investors anchor on what they are familiar with and avoid what is not known to them.

Practical prices have always differed with any price predicted using any of the models recommended by conventional scholars, When faced with the prospects of gain or loss, subjects may eschew heuristics in favor of more cognitively demanding processing which may decrease the potential for bias and increase the potential for superior performance and hence reward. Baker et al (2004) argued that the negative relation between returns and past volume is driven by optimistic investors generating volume and their optimism becoming reversed in the subsequent periods.

Most of finance and economic theories presume that individuals act rationally and consider all available information in investment decisions although a study by Berstein

(2006) notes that there is evidence of repeated irrationality, inconsistency and incompetence in the human decision making processes and choices when faced by uncertainties. Emerging evidence claims that Institutional investors are though seen to behave differently from the individual investors in part because they are agents acting on behalf of principal investors.

Glaser and Weber (2003) conducted an empirical study on Overconfidence and Trading Volume; they found that investors who think that they are above average in terms of investment skills or past performance trade more. Empirical study by David (2002) has shown that subjects will sometimes bias judgments towards the anchor even in situations where the anchor is of little value or is irrelevant. The findings explained that the presence of a primary or recency effect in the context of the anchoring and adjustment heuristic may be the existence of an "internal anchor". Thus, despite being expressly aware of the anchoring effect, participants were still unable to avoid it. Traditional finance has developed overtime although not without its deficiencies and the fact that security markets are not affected demand and supply shifts only to regulate the prices, thus developments in Behavioural finance seems to play a role in stock markets that cannot otherwise be explained by the traditional finance models.

However, it is evident that most of the studies were done in the developed countries with very little study on behavioural finance carried out in Africa. Specifically in Kenya anchoring has not been studied to establish its effect on individual investment decision making.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter introduces the logical framework to be followed so as to meet the objectives stated in chapter one of this study. The research design, the population of interest, the sample, the data instruments and the data techniques are discussed. This chapter provides an outline of the approach that was used to gather data to answer the research question. This chapter states the methodology used and how data was collected and analyzed so as to come up with findings, interpretation and conclusions.

3.2. Research Design

According to Rahman and Ramos, (2013) the research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and control variance. It specified the methods and procedures for the collection, measurement, and analysis of data. This study adopted descriptive research design.

Descriptive research design entails the process of collecting data in order to test hypotheses or to answer questions concerning the current status of the subjects in the study. This research design determines and reports the way things are and attempts to describe such things as possible behaviour, attitudes, values and characteristics. This design was appropriate in this study because it ensures in-depth analysis and description of the various phenomena under investigation.

3.3. Population

The study focused on individual investors selected from the 22 brokerage firms licensed by the CMA that were actively operational up to December 2013.

3.4 Sample

Simple random method was used to pick the sample to give all the respondents an equal chance of being selected. One brokerage firm was randomly picked and the overall sample size of 120 respondents was selected from the target population. The size is decided considering time and costs required to gather data while reducing the margin of error.

3.5 Data Collection

Data collection is important in assembling the required information with an aim of achieving research objective. Data to test anchoring by investors (respondents) was primarily collected using a semi-structured questionnaire. The questionnaire consists of 22 questions concerning the anchoring bias affecting individual investors investment decisions divided into two parts: Part A sought to capture general details of the respondent like gender, age and the number of years involved in securities trading. Part B addresses factors such as past performance, new information, fixing target price, personal judgment, experience and sources of information to investor all of which are indicators of anchoring as well as other control variables. These questions helped to elicit the relevant evidential information for analysis upon which the conclusions were drawn.

According to Taylor et al (2006), questionnaires are a sensible option when information is needed from a large number of people and is a powerful method to capture their opinions and attitude.

3.5.1 Data Reliability and Validity

Reliability is the extent to which an experiment, test, or any measuring procedure yields the same result on repeated trials. Reliability is influenced by random error which is the deviation from a true measurement due to factors that have not effectively been addressed by the researcher. As random error increases, reliability decreases, (Mugenda, 2009).

The researcher broadened the sample of measurement questions by adding similar questions to the data collection instrument while improving internal consistency of an instrument by excluding data drawn from measurement questions eliciting extreme responses and avoiding ambiguous questions that are of no value to the study. A correlation coefficient, statistically referred to as r, was used to show the strength of the correlation between a dependent variable (the subject under study), and the independent variable, which is manipulated to determine effects on the dependent variable. The researcher monitored the process to ensure that unintended persons did not fill the questionnaire and encouraged the respondent to seek clarity where necessary to increase the level of reliability.

Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. It is the degree to which results

obtained from the analysis of data actually represent the phenomenon under study. It is the accuracy and meaningfulness of inferences, which are based on the research results. It has to do with how accurately the data obtained in the study represents the variables of the study, (Mugenda, 2009).

The researcher used content validity to examine whether the instrument answered the research question and enhances the validity by involving accessible target population in the study, generating logical questions to ensure that respondents were comfortable to respond to the study and posing interesting questions to avoid demoralizing the respondents by getting them bored with the measurements. Adjustment to the research instrument was done through consultation and discussion with the supervisor to establish content validity.

3.6 Data Analysis

This section involves two sections: The analytical model that shows the variables of the study and the test of significance i.e. if there exists a relationship between the independent and dependent variable and the strength of the relationship. It also addresses the way at which data collected was analyzed so as to come up with findings, interpretation and conclusions.

3.6.1Analytical Model

Dependent variable is the variable measured, predicted or monitored and is expected to be affected by manipulation of an independent variable. It attempts to indicate the total influence arising from the effects of the independent variable and varies as a function of

the independent variable. In this study, individual investors investment choices is the dependent variable, denoted by (Y).

Anchoring is the Independent variable denoted by (X) in the study, it is a variable that a researcher manipulates in order to determine its effect or influence on another variable and it predict the amount of variation that occurs in another variable. Individuals anchor on a readily accessible and adjust to estimate the true value while subjects in the anchored condition first judge whether a specified number (the anchor) is higher or lower.

Other control variables in the study were level of education and experience, investor beliefs about the security, type of industry, and the price of a security denoted as bx2, bx3..........bxi

A multi linear regression model was used in the data analysis. The model is of the form;

$$Y= a + bx_1 + bx_2 + bx_3 + ...bx_i + e \; ; \; \text{Where}$$

Y - the dependent variable

X₁ - is the Independent variable

X₂, X₃ - are control variables

a Is the constant and **b** Slope/intercept and **e** Margin of error

The effect of X (Anchoring) on individual investment choices (Y) was captured by the fact that the investors rely on past experience, past prices (fair prices), ignore new information, fixing prices before buying or selling stock and being on the lookout for the

best time to buy/sell stock, guided by moods and their level of openness to new experiences. To examine if the factors influencing anchoring are present and their levels, 3-point and 5-point Likert scale questionnaire was administered.

The study involved qualitative and quantitative data that was analyzed using Statistical Package for Social sciences (SPSS). According to Blalock (1978) descriptive statistic aimed at giving a concise picture of the data by organizing, summarizing and presenting data. This category of statistics includes among other things, the mean, mode, percentages frequencies and tables.

3.6.2 Test of significance

This part of the analysis was to establish the relationship between the variables. In general two variables are said to be linearly related, if there exist a relationship of the form: $\mathbf{Y= a + bx.}$ On the other hand the relationship between two variables is said to be non-linear if corresponding to a unit change in one variable, the other variable does not change at a constant rate but changes at fluctuating rate. Such a relation may be of the form $\mathbf{Y= a + bx + Cx^2}$

Correlation coefficient provides for the degree and direction of the relationship. It measures the association or co-variation of two or more dependent variables. The Pearson Product Moment Correlation Coefficient ($\mathbf{r}$) was used for this purpose. $\mathbf{r}$ provided information on the direction and the magnitude relationship between X and Y. $\mathbf{r}$ can

range from +1 for perfect positive correlation where the variables change value in the same direction as each other. When r is -1 there is perfect negative correlation where y decreases linearly as x increases. A value of r = 0 represents the absence of any relationship (Moore, 1983) and the values in between interpreted accordingly.

CHAPTER FOUR

DATA ANALYSIS, RESULT AND DISCUSSIONS

4.1 Introduction

The results of the research project exploring the effect of anchoring on the investor choices in Kenya. The results of the analyses are presented per study objective and described in tables where stated. The sample size for the analyses was 102 respondents. Once the respondents answered the questionnaire, data was then coded and analyzed using SPSS.

4.2 Descriptive Analysis

4.2.1 Participation Rate

The study targeted 22 approved brokerage firms in Kenya as by December 2013 in collecting data with regard on the effect of anchoring on the investor choices in Kenya. From the study, 102 respondents out of the 120, making a response rate of 85%. According to Mugenda and Mugenda (2003) a 50% response rate is adequate, 60% good and above 70% rated very good. This also concurs with Kothari (2004) assertion that a response rate of 50% is adequate, while a response rate greater than 70% is very good. This implies that based on this assertions; the response rate in this case of 86% is very good.

Table 1: Response Rate

	Questionnaires administered	Questionnaires filled & returned	Percentage
Respondents	**120**	**102**	**85%**

Source: Researcher 2014

4.2.2 Demographic Information

Table 2: Investment category by Gender

	Frequency	Percentage
Male	72	71%
Female	30	29%
Total	**102**	**100%**

Source: Data, 2014

Figure 1: Demographic information
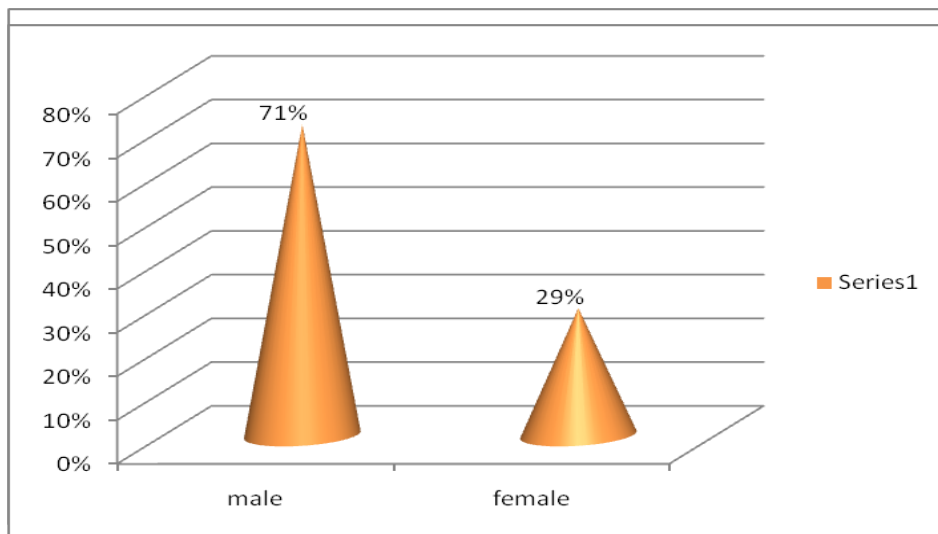
Source: Researcher, 2014

According to the analysis of the findings it is evident that majority (71%) of investors are male while only the remaining 29% are female investors. Therefore it was revealed that most respondents are male investors as it is illustrated in figure 1.

4.2.3 Investor's Age

Figure 2: Investors Age distribution in Years

Source: Researcher 2014

The respondents were required to indicate their age category where the study findings indicated that majority (35%) indicated that their age bracket was between 31 and 40 years. Analysis of findings also indicate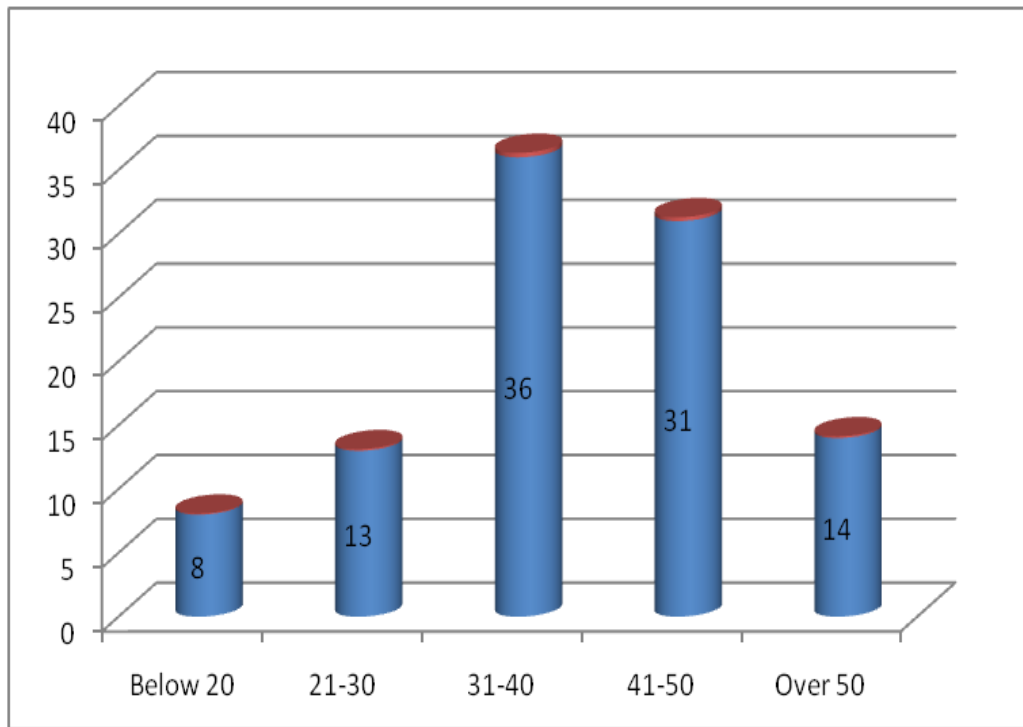d that 30% of the respondents were between 41and 50 years of age. The findings further indicated that over 13% between 21-30years, 8% below 20% while the remaining 14% were above 50 years of age. The finding therefore concludes that the respondents were old enough to provide valuable responses that pertain on effect of behavioral biases on the investment choices by investors. The findings of the study are illustrated in figure 2.

4.2.4. Investors Level of Education

Figure 3: Level of Education
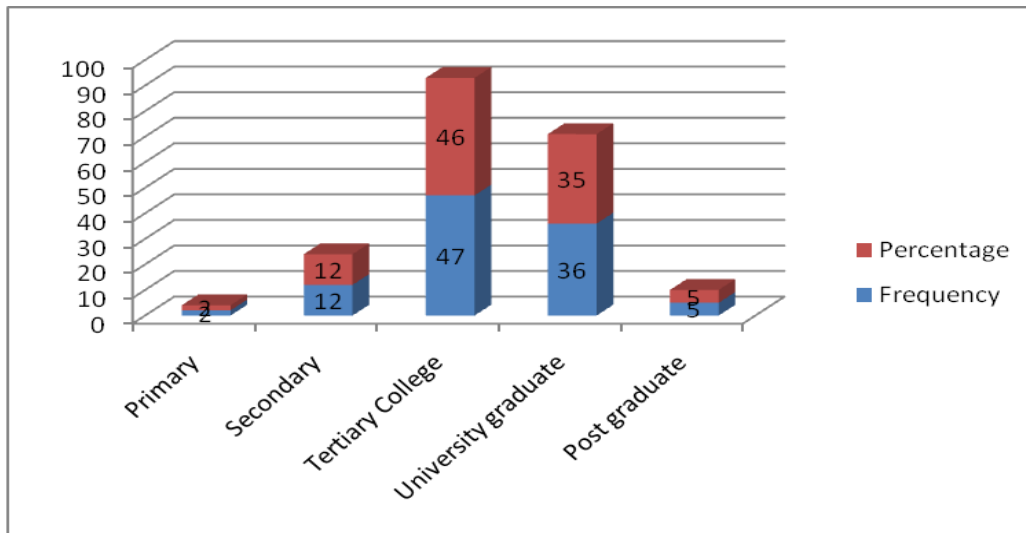
Source: Researcher, 2014

The study sought to find out the respondents level of education. The findings of the study are displayed in figure 3. From the findings, majority (46%) had tertiary college, while 35% of the respondents indicated that they had attained university degree. The study further indicated that 12% of the respondents had secondary education, 2% with minimum of primary education and only 5% had post graduate degree. It is clearly indicated that most respondents had tertiary college of education.

4.2.5 Number of years engaged securities trading

Figure 4: Years of Trading
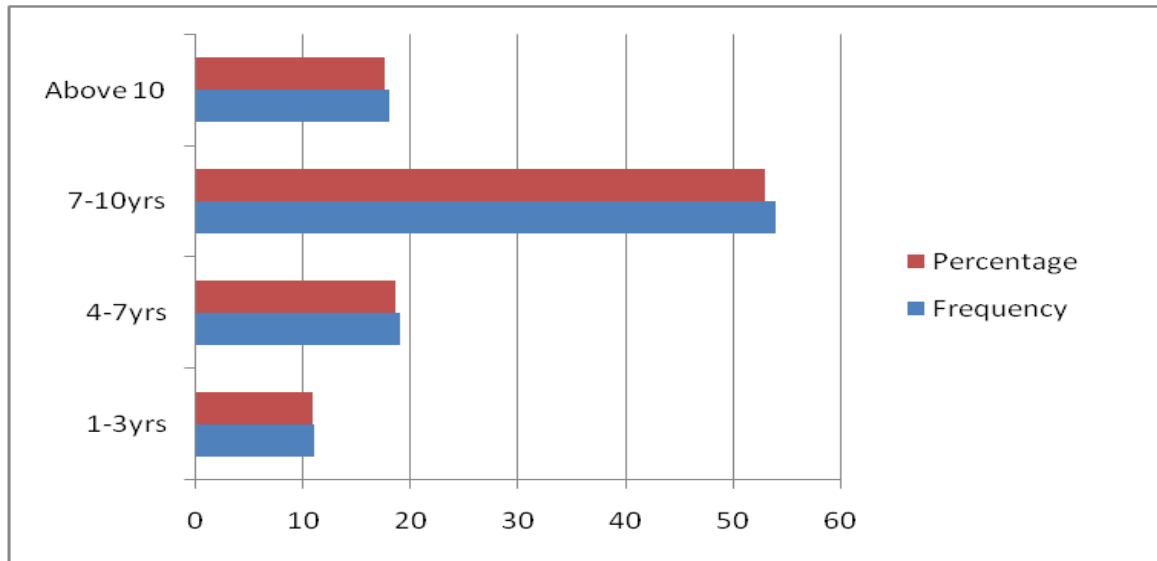
Source: Researcher, 2014

The study further determined duration invested in the securities market. According to the analysis of the findings 53% have invested with the fund between 7 to 10 years, 10.8% have invested 1-3 years, 17.6% indicated that they have invested for more than 15 years and only the remaining over 18% revealed that it was between 4-7 years. Most of the respondents have invested for 7-10 years indicating that most respondents have been investing in securities and therefore were good candidates in the study of the effect of behavioral biases on the investment choices by investors in Kenya

4.2.6 Anchoring

Table 4.0: Anchoring in decision making

	Yes	Sometimes	No
Do you as an investor consider the past performance of a stock before investing in it?	42%	44%	14%
Do you fix a target price for buying/selling in advance (say, before start of trading day)?	28%	66%	5%
If you hear views from a famous analyst that conflicts with your opinion about a stock, would you change your opinion immediately?	19%	20%	61%
Do you use stop losses in your trades?	39%	12%	49%
Do you end up sticking with a losing stock (wrong investment decision) for too long?	25%	45%	30%
Consider the following situation: The Price of a Blue Chip share is Kshs 500. This falls to Kshs 100 as a result of a crisis. Analysts are neutral and give hold signals. Will you purchase the share at the new low, keeping in mind the recent high?	55%	13%	32%

Source: Computed Data 2014

When asked whether they tend to fix a target price for buying or selling a stock before the start of a trading day, 28% said yes and 66% said that they do it sometimes. From this, it found out that in most cases it was likely that investors were likely to have a price range

in mind, even if they were not fixing it beforehand. When asked if they place stop losses in their trades, 39% of the investors said that they always do, out of which 64 were young investors and only seventeen were experienced investors. This question was asked to check if the investors are fixed on prices at which they enter the market, and if they have an exit-strategy in case things go wrong during the day. Participants were then presented with a hypothetical question where they were asked to consider buying a share at a new low, which was 80% lower than the anchor price. 55% of the investors said that they would go for the stock, while 32% said they would not. When asked if on hearing views from a famous analyst that conflict with their opinion about a stock, if they could change their opinion immediately? The majority (61%), out of which 50 were young investors, said they could not change while 20% said they could change at a times. Only 30% of the respondents could not stick to a losing stock for long. For the sake of a binding analysis, the six questions were combined to have a composite 3-point Likert scale variable. Weighted scoring analysis was performed to see whether the investor groups exhibited Anchoring in a significantly different manner.

Table 4.1 Weighted Scoring: Anchoring Bias

Type of Investor	Weighted Score	Mean	Reference Score	Outcome
Young	70	20	15.3	Anchoring
Experienced	32	15.3	15.3	No Anchoring
Total	**102**	**17.67**	**15.3**	Anchoring

4.2.7 How The Investor Ventured Into Securities Trading

Majority of the investors (40%) were first introduced by the expert pr experienced person in the securities market, while 28% relied on the advice of their friends or colleagues. 13% based their decisions on information from the media. Thus the investors are regarded as having access to sufficient information before making decisions on their portfolios. This is represented in the figure 5

Figure 5: How investor was introduced in securities market
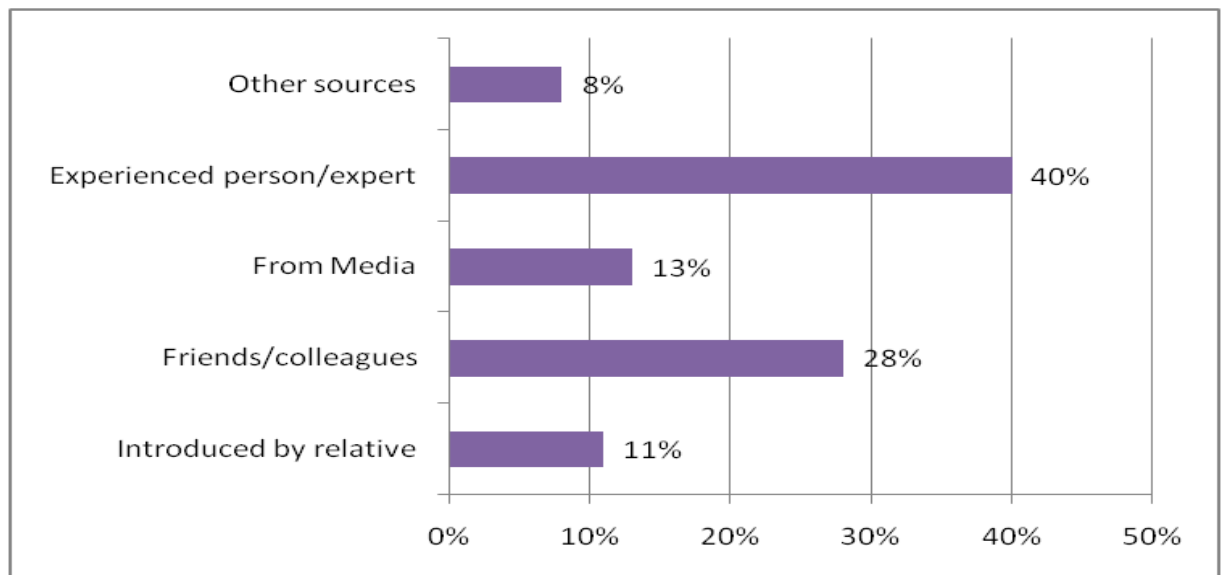
Source: Computed data,2014

Majority of the investors (40%) were first introduced to the securities market by an experienced person or an expert in the securities exchange, 28% and 11% engaged in the securities market courtesy of friends/ colleagues and relatives respectively, with only 13% relying on the information from the media

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4.3 Correlation Analysis

Table 4.2: Relationship between anchoring and investment choice

		Qn 10	Qn 11	Qn 13
Qn 10	Pearson correlation	1	0.600(*)	0.598
N		102	102	102
Qn 11	Pearson correlation	0.600(*)	1	0.701(*)
N		102	102	102
Qn 13	Pearson correlation	0.589(*)	0.621(**)	1

Source: Computed data, 2014

From Table 4.2, there is a strong positive relationship between Anchoring and individual investment decision making

4.4 Regression Analysis

The researcher ran a multi linear regression on the six variables and the result were as tabulated below

Table 4.4.1: Summary Statistics

The determination coefficient as measured by the adjusted R-square presents a strong positive relationship between dependent and independent variables given a value of 0.936. This depicts that the factors account for 93.6% of the total variations in investors choices.

R	R²	Adjusted R²	Std. Error of the Estimate
.978b	.957	.936	.0041719

Source: Researcher, 2014

4.5 Summary and Interpretation of Findings

From the study, 102 respondents out of the 120, making a response rate of 85%. According to Mugenda and Mugenda (2003) a 50% response rate is adequate, 60% good and above 70% rated very good. This also concurs with Kothari (2004) assertion that a response rate of 50% is adequate, while a response rate greater than 70% is very good. This implies that based on this assertions; the response rate in this case of 86% is very good.

According to the analysis of the findings it is evident that majority (71%) of investors are male while only the remaining 29% are female investors. Therefore it was revealed that most respondents are male investors and women are not active investors in the securities due to lack of information or financial capacity.

The respondents were required to indicate their age category where the study findings indicated that majority (35%) indicated that their age bracket was between 31 and 40 years. Analysis of findings also indicated that 30% of the respondents were between 41and 50 years of age. The findings further indicated that over 13% between 21-30years, 8% below 20% while the remaining 14% were above 50 years of age. The finding

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therefore concludes that the respondents were old enough to provide valuable responses that pertain on effect of behavioral biases on the investment choices by investors

The study further determined duration invested in the securities market. According to the analysis of the findings 53% have invested with the fund between 7 to 10 years, 10.8% have invested 1-3 years, 17.6% indicated that they have invested for more than 15 years and only the remaining over 18% revealed that it was between 4-7 years. Most of the respondents have invested for 7-10 years indicating that most respondents have been investing in securities and therefore were good candidates in the study of the effect of behavioral bias on the investment choices by investors in Kenya

From the findings, majority (46%) had tertiary college, while 35% of the respondents indicated that they had attained university degree. The study further indicated that 12% of the respondents had secondary education, 2% with minimum of primary education and only 5% had post graduate degree, thus have information on traditional finance models yet they are affected by behavioural bias as they make investment decisions

When asked whether they tend to fix a target price for buying or selling a stock before the start of a trading day, 28% said yes and 66% said that they do it sometimes. From this, it could be thought that in most cases it was likely that investors were likely to have a price range in mind, even if they were not fixing it beforehand. When asked if they place stop losses in their trades, 39% of the investors said that they always do, out of which 64 were young investors and only seventeen were experienced investors. This question was asked

to check if the investors are fixed on prices at which they enter the market, and if they have an exit-strategy in case things go wrong during the day. Participants were then presented with a hypothetical question where they were asked to consider buying a share at a new low, which was 80% lower than the anchor price. 55% of the investors said that they would go for the stock, while 32% said they would not. When asked if on hearing views from a famous analyst that conflict with their opinion about a stock, if they could change their opinion immediately? The majority (61%), out of which 50 were young investors, said they could not change while 20% said they could change at a times. Only 30% of the respondents could not stick to a losing stock for long. Weighted scoring analysis was performed to see whether the investor groups exhibited Anchoring in a significantly different manner.

Majority of the investors (40%) were first introduced by an expert or experienced person in the securities market, while 28% relied on the advice of their friends and colleagues. 13% based their decision on information from the media. Thus the investors are regarded as having access to sufficient information before making investment decisions on their portfolios thus lack of information cannot be termed a major issue towards the bias.

The determination coefficient as measured by the adjusted R-square presents a strong positive relationship between dependent and independent variables given a value of 0.936. This depicts that the factors account for 93.6% of the total variations in investors choices

CHAPTER FIVE

SUMMARYOF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter covers the findings and makes conclusions based on the objective of the study which was to establish the effect of Anchoring on the individual investment choices by investors in Kenya. This chapter also contains a summary and recommendations for improvement arising from the study and proposes direction for further research.

5.2 Summary and Discussions

The research attempted to analyze the effects of Anchoring bias on the decision making process of investors. Effects of these this factor on the decision making process of a sample of 102 investors from Kenya were studied. Out of this sample, two sub-samples of 51 investors each were created: experienced investors – those aged above 30 with at least 7 years of investing experience and Young investors – those aged 30 or below with less than 7 years of experience. The sample and sub-samples have been processed and analyzed using SPSS Software and Microsoft Excel. The variables were coded into SPSS, 1 of them a dichotomous variable representing investor group, and the remaining six represented: Characteristics of Securities Past Prices, industry, investors belief about the value of asset, disposition effect, were created by using scaling techniques like 3-point and 5-point Likert Scales, and arithmetic mean.

The findings revealed that most respondents are aged between 31-40 years. The findings revealed that majority of the participant are educated up to tertiary colleges who recorded the highest percentage and have so far have been trading in securities between 7-10 years.

The study finding concludes that most respondents exhibited the disposition effect behavior as they did rely on past history and experiences in investment decisions and also selected investment options based on past performance of various investments. The study sought to determine from the respondents if whether their past history influenced the present investment decisions, many of them indicated very likely implying that they indeed relied on past history and experiences in investment decisions and also selected investment options based on past performance of various investments. The study also explored on whether they sell more shares when the sale price is above the purchase price than when the sale price is below the purchase price whereby the findings of the study indicated that it is very unlikely and on whether they sell more shares when the sale price is above the last period price than when the sale price is below the last period Price, the respondents clearly revealed that they are likely to sell more shares when the sale price is above the last period price than when the sale price is below the last period Price The study findings further revealed that most respondents tend to fix on prices at which they enter the market, and only 39% have an exit-strategy in case things go wrong.

Younger investors seemed to give most importance to opinions of either friends/brokers. 47.8% of them opined that they listened to friends or recommendations from brokers, while making their investment decisions. This could possibly be owing to the fact that

broker recommendations are frequently available in the trading platform and via email intraday and before/after-market. From the survey, it was clear that younger investors mainly prefer online trading rather than trading at the brokerage, which is preferred by the more experienced traders.

Experienced investors, on the other hand, were biased towards opinions from media and other so-called experts, as disclosed by 56.5% of the experienced participants. Rightly so, because they seem to have more time to follow financial news and the views of 'experts' who seem to know just about every twist and turn the market takes. On top of this many of them are technologically challenged, thus preferring to trade at the brokerage floor with the help of 'expert' traders who are more than happy to make trading calls on their behalf.

5.3 Conclusion

One word, which has dominated the world of financial stock markets since 2008, has been 'Volatility'. Extreme movements in global indices and stock prices because of fear and anticipation has, as it is supposed to, made life tough for a rational investor. Market sentiments have been observed to sway wildly from positive to negative and back, in the shortest timeframes like weeks, days and hours. In this context, understanding irrational investor behavior deserves more importance that it has ever had. Behavioral finance - a relatively new field that came into relevance in the 1980s – studies the effect of psychology on financial decision-making. It studies how investors interpret new information and act on it to make decisions under uncertainty. The science does not try to

label traditional financial theories as obsolete, but seeks to supplement the theories by relaxing on its assumptions on rationality and taking into consideration the premise that human behavior can be understood better if the effects of cognitive and psychological biases could be studied in context where decisions are made.

Chevalier and Ellison's (1999) argued that while a small impact of holding a business degree on investment choices as suggesting that while high educational attainment enhances performance, expertise in the area of business does not. The (weak) negative relationship of years of experience on return may reflect career concerns with less experienced investors feeling the need to work harder than those with more experience. The study found out personal judgment in making investment decisions, is found to be solely determined by years of experience as an investor. The positive coefficient on this variable is consistent with expectations: more experienced investors use more personal judgment in making decisions.

Tests had shown that all the investors were affected by the bias while making investment decisions but it could not be established that one investor group had suffered more losses under the influence of these bias. Results from the analysis suggested that, even though investors were equally prone to committing erroneous decisions owing to being biased, the degree to which the bias was affecting them were different in a significant manner to an extent that younger and experienced investors could be separated as two different groups of human beings exhibiting a different behavioral pattern. When asked to reveal financial losses suffered 63 out of the 102 investors admitted to having faced a loss of at

least 30%. In this context, the study argues that being subject to this behavioral bias had played a significant role in the losses suffered during the crisis by both the young and experienced investors.

According to Kumar (2004), stock-specific characteristics explain a significant portion of the variation in trading decisions. Features such as the average price, size, covariance of returns, its institutional ownership and whether or not options trade is permitted on this stock all determine how a security is received in the market. Some of the investors did not have tangible information on traditional models of finance on the characteristic of the securities and could therefore not base their investment decisions on the characteristics of the security but their sole aim was rather based on the ability to make maximum gains.

5.4 Limitations of the study

The researcher met with various challenges when conducting the research that included the following:

The main weakness of the study is owing to the fact that it aims to study investor behavioral patterns using questionnaires. Making financial decisions can be demanding for various reasons that possibly could push many into making irrational decisions at one point or the other. However, while answering a questionnaire, the same individuals are likely to be relaxed and in a better frame of mind, hence choosing to give answers, which may put them across in different light, especially in context of questions which were presenting hypothetical situations. To overcome this problem to an extent, many questions attempted to make the participants admit mistakes they have made in the past.

A second limitation arises out of the fact that some respondents would not want to give the information as they considered it of confidential importance and cited it as some form of investigation to ascertain their wealth for purpose of taxation, while others were reluctant to participate in the study saying that they were normally very busy to find time to fill the questionnaire in full.

Kenya is a vast country, and this study cannot be considered an evaluation of the average Kenyan investor. The sample collected was mainly from one brokerage firm, which accounts for a small percentage of the population. The location was chosen mainly because it was the researcher's home of residence thus making data collection convenient. It remains to be seen whether investors in other parts of the country would exhibit a similar behavior as would be found out by this study.

5.5 Recommendations

5.5.1Policy Recommendation

The main recommendation for investors is to make constant attempts to increase their awareness on behavioral finance by educating themselves on the field. Studying about the biases, and reflecting on their decisions are likely to help achieve better self-understanding of to extent and manner to which they gets influenced by emotions while making financial decisions under uncertainty. Even after satisfactory awareness is achieved it is highly recommended that they maintain a chart of the behavioral biases

they are likely to be vulnerable to. This should be reviewed periodically in order to recollect and refresh their memory thus giving themselves a better chance to make improved financial decisions in the stock market. Most essentially, what remains unanswered is whether greater awareness of investors about behavioral biases is likely to increase the market efficiency. Awareness about behavioral biases and its application in the course of making investment decision would be increasing the rationality of investment decisions thus making way for higher market efficiency.

Behavioral Finance should be given more importance in the Academic Curriculum, if it has not already been given its due. The schools do an excellent job in equipping students with knowledge of the sciences and various techniques, which definitely serves as a foundation to a great career. If they are equipped with excellent knowledge in Behavioral finance, the psychological aspect of the field would have already helped them achieve better self-understanding, and hence decision making in pressure situation might not be as challenging to them as it would be otherwise. Knowing what to do is important, but knowing when to do what is to be done, is priceless.

Behavioral finance models are not empirically supported and therefore should not be used in isolation for investment analysis by individuals. The study recommends that individuals should have computational skills in simplifying complex tasks to make decision process easier instead of using heuristics which may lead people to some irrational behaviors.

5.5.2 Suggestion for further study

The questionnaire survey method, which was the tool employed to gather data, was one of the main limitations of this study, albeit the only practical option to reach real investors. Any study undertaken in this direction with the target audience in mind as students of economics and finance, will provide limitless opportunities to come up with creative experimental premises on the lines of trying to out-think contemporaries.s

Results from the study are more indicative in nature, than confirmative. However, the findings do open up various research opportunities where:

Subjects should be randomly split into two groups. One group should be given a knowledge session about a certain bias. Then both groups should be presented with a scenario, which tries to induce the subjects into committing the bias.

Subjects should be provided with a scenario where they are likely to be influenced by a certain bias. Then they should be given a knowledge session on the bias. A similar scenario should be presented to the same group a day later, to see if the new awareness has any impact on their decision-making.

Methods like Game Theory and Probabilistic Logic can be used as inspiration while setting up the premises for a detailed and more advanced study. The nature of the field promises that a researcher would be presented with many opportunities to be innovative and creative.

Kenya is a vast country, and this study cannot be considered an evaluation of the average Kenyan investor. The sample collected was mainly from one brokerage firm, which accounts for a small percentage of the population. Further research can be carried out across the counties to verify if the investors carry similar views as those sampled from the brokerage firm

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APPENDICES

Appendix I

Questionnaire

I am a student at the University of Nairobi, writing my Master in Business Administration research project on the effect of Anchoring on investor's investment decisions. I kindly request you to take part of your time to complete this questionnaire. Your honest feedback is of highest importance in the course of my academic research. This information will not be used to serve any other purpose. Tick your answer in the brackets ( ) provided.

Part A

1) Gender: Male (   ) Female (   )

2) Age in Years: i. Below 20(   )   ii. 21-30(   )

                           iii. 31-40 (   )   iv.41-50(   )   v. Over 50(   )

3) Number of years engaged securities trading i.1-3 (   )   ii.4-7   (   )

                                                iii.7-10 (   )   iv. over 10 (   )

4) How did you venture into securities trading?

   i) Introduced by relative   (   )

   ii) Learnt of it from friends/colleagues   (   )

   iii) From media   (   )

   iv) From experienced investment person/expert (   )

   v) Others, Specify………………………………………………………

Part B

5)   What price range of shares do you prefer to invest in?

High   ( )   Mid   ( )   Low   ( )

6) Does the past history influence your present investment decision?

Yes   ( )   Somehow ( )   No   ( )

7) Whose judgment analysis do you trust most while making investments?

Self   ( )   Broker/friends ( )   Media/Expert opinions   ( )

8) Do you consider the past performance of a stock before investing in it?

Always   ( )   Sometimes   ( )   Never   ( )

9) Do you use stop losses in your trades?

Always   ( )   Sometimes   ( )   Never   ( )

10) How would you describe your portfolio performance in the financial market for the last 5 years?

i)   Excellent   ( )
ii)   Good   ( )
iii)   Fair   ( )
iv)   Poor   ( )
iv)   Very poor   ( )

11) Based on the above performance, would you invest in the same portfolios today?

i) Yes   ( )

ii) No   ( )

iii) Others. Specify…………………………………………………………………

12) Investors build their investment portfolios based purely on quantitative analysis of risk and returns of individual asset within the portfolio without the influence of emotional and psychological factors

i) Strongly agree ( )

ii)) Agree ( )

iii) Sometimes ( )

iv) Disagree ( )

 v) Strongly disagree ( )

13) Do you fix a target price for buying/selling in advance (say, before start of trading day)?

Yes ( ) Sometimes ( ) No ( )

14) If yes, which of the following criteria will you consider to fix the price?

i) 52 Week high/low ( )

ii) Price/Earnings Ratio (P/E) ( )

iii) Average Price in recent past ( )

iii) Issue Price ( )

iv) Advice from broker ( )

15) To what extent do you agree with the following statement?

"I am a keen investor who is on look out for new market information that relates to my portfolio and I use the new information to evaluate my investment decisions)

i) Strongly agree ( )

ii) Agree ( )

iii) Not always ( )

iv) Disagree ( )

v) Strongly disagree ( )

16) For an investment whose historical performance has been consistently excellent for your institution, how do you treat it in the subsequent selections?

1. Retain it as part of your portfolio ( )

2. Replace it with others ( )

3.Others. Explain…………………………………………………………………………

17) Sometimes the quantitative financial models do not yield the true representation of the market behavior:

Yes ( ) No ( )

If the answer is No, skip to Qn.16.

As a result, we use our personal judgment and experience to predict the market behavior and thus make optimal decision.

Yes ( ) No ( )

18) Consider the following situation: The Price of a Blue Chip share is Kshs 500. This falls to Kshs 100 as a result of a crisis. Analysts are neutral and give hold signals. Will you purchase the share at the new low, keeping in mind the recent high?

Yes ( ) Sometimes ( ) No ( )

19) If you hear views from a famous analyst that conflicts with your opinion about a stock, would you change your opinion immediately?

Yes ( ) Sometimes ( ) No ( )

20) Do you end up sticking with a losing stock (wrong investment decision) for too long?

Yes ( ) Sometimes ( ) No ( )

21) Can you name some stocks that have been a part of your portfolio in the past 1 year?

22) On a scale of 1 to 5, how would you rate your knowledge on a relatively new field which studies financial decision making, called ' Behavioral Finance ' ('5' – Excellent ,4-Good, 3-Fair, 2- Poor and '1' – Very Poor)

THANK YOU FOR SPARING YOUR TIME

Appendix II

LIST OF REGISTERED BROKERAGE FIRMS IN KENYA

1. CFC /SBG Securities Ltd.
2. KESTREL/ Kestrel Capital(EA) Ltd
3. Dyer & Blair Investment Bank Ltd
4. GENGHIS/ Genghis Capital Ltd
5. FAIDA Investment Bank Ltd
6. TSAVO
7. STANDARD Investment Bank Ltd
8. Drummond/ Francis Drummond & Company Limited
9. Ngenye Kariuki & Co. Ltd
10. Suntra Investment Bank Ltd
11. Old Mutual Securities Ltd
12. Sterling Capital Ltd
13. ApexAfrica Capital Ltd
14. Kingdom Securities Ltd
15. Afrika Investment Bank Ltd
16. ABC Capital Ltd
17. NIC Securities Limited
18. Discount Securities Ltd. (Under Statutory management
19. African Alliance Kenya Investment Bank Ltd
20. Renaissance Capital (Kenya) Ltd
21. CBA Capital Limited
22. Equity Bank/ Equity Investment Bank Limited

Appendix III

COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE.

Agricultural Sector	Commercial and Services
1. Eaagads Ltd ..	8. Express Ltd .
2. Kapchorua Tea Co. Ltd .	9. Kenya Airways Ltd.
3. Kakuzi	10. Nation Media Group
4. Limuru Tea Co. Ltd .	11. Standard Group Ltd
5. Rea Vipingo Plantations Ltd .	12. TPS Eastern Africa (Serena) Ltd ..
6. Sasini Ltd.	13. Scan.
7. Williamson Tea Kenya	14. Uchumi Supermarket Ltd ..
	15. Hutchings Biemer Ltd ..
	16. Longhorn Kenya Ltdgroup Ltd .
Banking	**Manufacturing and Allied**
17. Barclays Bank Ltd	28. B.O.C Kenya Ltd.
18. CFC Stanbic Holdings Ltd.	29. British American Tobacco Kenya Ltd.
19. I&M Holdings Ltd ..	30. Carbacid Investments Ltd.
20. Diamond Trust Bank Kenya Ltd ..	31. East African Breweries Ltd.
21. Housing Finance Co Ltd ..	32. Mumias Sugar Co. Ltd.
22. Kenya Commercial Bank Ltd. .	33. Unga Group Ltd.
23. National Bank of Kenya Ltd ..	34. Eveready East Africa Ltd.
24. NIC Bank Ltd ..	35. Kenya Orchards Ltd.
25. Standard Chartered Bank Ltd .	36. A.Baumann Co Ltd.
26. Equity Bank Ltd ..	
27. The Co-operative Bank of Kenya Ltd.	

Construction and Allied	Energy and Petroleum
37. Athi River Mining .	42. KenolKobil Ltd..
38. Bamburi Cement Ltd .	43. Total Kenya Ltd..
39. Crown Berger Ltd..	44. KenGen Ltd..
40. E.A.Cables Ltd...	45. Kenya Power & Lighting Co Ltd..
41.E.A.Portland Cement Ltd	46. Umeme Ltd.
Investment	**Growth Enterprise Market Segment**
47. Olympia Capital Holdings ltd .	50. Home Afrika Ltd
48. Centum Investment Co Ltd.	**Telecommunication and Technology**
49. Trans-Century Ltd	**51.** Safaricom Ltd
Automobile and Accessories	**Insurance**
52. Car and General (K) Ltd .	56. Jubilee Holdings Ltd
53. CMC Holdings Ltd	57. Pan Africa Insurance Holdings Ltd .
54. Sameer Africa Ltd	58. \Kenya Re-Insurance Corporation Ltd..
55.Marshalls (E.A.) Ltd	59. Liberty Kenya Holdings Ltd.
	60. British-American Investments Company (Kenya) Ltd
	61. Cic Insurance Group Ltd.

Source: http://www.nse.co.ke .